JAN 5 1917
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SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

Volume IV SATURDAY, DECEMBER 30, 1916 Number 105

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THE SCIENCE PRESS

LANCASTER, PA. GARRISON, N. Y.

NEW YORK CITY: SUB-STATION 84

Entered as second-class matter January 2, 1915, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879

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SCHOOL AND SOCIETY

Volume IV SATURDAY, DECEMBER 30, 1916 Number 105

THE COST OF EDUCATING THE UNDERFED[1]

THE cost of educating the underfed child naturally depends upon the number of such children existent in a school system and the special education which they require at an expense beyond that necessary for the training of normal children. Malnutrition, which is really more than mere underfeeding, is one of the most common and, until recently, the least observed or noted among diseases and affections of children attending elementary schools. The extent to which this deficiency exists may be illustrated by such figures as the following.

McMillan, of Chicago, found 15 per cent. of kindergarten children physically below par, and estimated that underfeeding was the cause in 11 per cent. in kindergartens and 7.8 per cent. in other grades. MacKenzie regards one third of all the school children in Edinburgh as poorly nourished. Maxwell is reported as saying to the National Education Association, in 1904, that there are hundreds of thousands of children unable to learn because of hunger. Warner and Tuke found 28.5 per cent. of London school children suffering from deficient feeding. The New York Committee on the Physical Welfare of School Children, in 1907, declared 13 per cent. of 990 children examined to be suffering from malnutrition, and Sill, in 1909, estimated that 40 per cent. of the children in the elementary schools of New York City were poorly nourished. The New York School Lunch Committee, in 1910, in an examination of 2,150 children, adjudged 13 per cent. to have marked cases of malnutrition.

If one considers it from the economic standpoint and takes the cost of living at any per capita one wishes, with the present cost of living, it is apparent that it is economically impossible for families to secure the necessary amount of food on the standard wage of the United States to-day, which is below $15.00 a week for man, woman and child. The standard wage for children in 1905 was $3.46; for women, a little above $6.17; and the average for men in the United States was $11.16 a week. Now, if you will consider the proportion of your own community that is getting these insufficient amounts per week, and the group who work only a few months in the year, you will see that it is impossible for them on such a wage basis to keep the body in the proper state to support the mind. Was it not Bacon who said, "Is not the mind in some way in custody of the stomach?"

In Chicago, in 1908, of over 10,000 children examined, 12 per cent. were reported to suffer from malnutrition. In Boston, in 1909, underfeeding was found in 16 per cent. of over 5,000 children. In Philadelphia, in 1910, 24 per cent. of 500 children examined were found to be suffering from underfeeding. In St. Paul, in 1910, 20 per cent. of 3,200 children in schools in the poorer districts were reported to manifest evidences of marked underfeeding. In Rochester, malnutrition was noted in 5 per cent. of the children examined.

The Royal Commission on Physical Training in 1903 recognized malnutrition

[1] Read before the Second International Conference Woman's Educational and Industrial Union, Boston, Mass., May 5, 1916.

as a marked cause among low physical standards among children. According to Wood, among the 20,000,000 school children of this country, 25 per cent. are suffering from malnutrition. The extent to which malnutrition is productive of physical defects or the degree to which physical defects are responsible for malnutrition, has not been determined. Their interdependence appears to be certain.

Malnutrition is from two to three times as common among children who are retarded mentally as among those making average progress. McMillan and Bodine in Chicago found that of 2,100 retarded children 54.6 per cent. were suffering from malnutrition. Harrington's report on 90,000 school children of Boston places the number of anemic and ill-nourished at approximately 5,000, or nearly 6 per cent. Malnutrition, in general, may be regarded as existent to the extent of 10 to 15 per cent. for cities throughout America.

Regardless of the essential causes of malnutrition, the question immediately arises as to what is the cost of educating them. In so far as malnutrition is a cause of retardation, the cost obviously is two fold, the actual educational cost of physical supplies, instruction and professional control incident to the education of repeaters. The secondary cost to the community is the cost resultant from defective education growing out of inability to complete the school course in the time for which it was prepared. A further cost of education is in the more rapid elimination of underfed children, which may be construed as representing to some extent a wastage of educational funds.

The elementary school is designed to give a definite type of education. Those who fail to complete such work are not receiving the most adequate preparation for their life in a community. By virtue of their retardation, they are eliminated as soon as the age of compulsory attendance is passed, with consequent loss of education to the individual and to the community.

Because malnutrition is frequently a factor in maintaining a low degree of mental alertness, many undernourished children are regarded as defectives, the cost of whose instruction is higher than that of normal children, and thus the community is obliged to make a greater outlay for the education of children whose real defect may be attributed to their malnutrition. The proportion of children in classes for anemic children, in classes established for the pre-tuberculous, are maintained at higher cost to offset the physical deterioration, largely resultant from malnutrition.

Twenty-five per cent. of our public-school children fail to attend school 75 per cent. of the time. Preventable disease is the large factor in this unfortunate number of absences and malnutrition plays no small part in preparing the soil for such preventable diseases. This is a factor which is determined only with difficulty, but is certainly indicative of a loss of full value received from the money expended for educational work.

Malnutrition has not been generally recognized. Medical inspectors are examining little William Jones and they discover that he has adenoids, doesn't stand straight, the teacher complains of him because he doesn't pay proper attention, and he is unpopular with his teacher, with his fellows and with himself; but there is no one who has said that Willie is suffering from malnutrition; no one has pointed out that he can't be expected to appear bright and lively when his stomach is empty. Very likely citizens point with pride to the fact that there is not a case of malnutrition in the entire state of Massachusetts because in the reports of the medical examiners the word "malnutrition" is not included. The

medical inspector will note with glee that the teeth are defective, but it is only when he finds a poor, puny specimen that looks as though he was ready to be given over to the great white plague, and he can not find anything else tangible the matter with it, that he says, "Well, I guess he has malnutrition!"

Malnutrition is distinctly related with many physical defects, such as enlargement of the glands of the neck, St. Vitus dance, defective vision, defective teeth and large tonsils and adenoids. The relation between the cause and effect may not be clear and at times malnutrition is an effect and other times a cause. The chief medical officer of London (1910) stated:

> It is certain that malnutrition and physical defects are closely associated and react upon each other, but it is difficult to determine their exact relation and physical evils. Merely to increase the supply of food would in many cases not solve the complex problem of the individual child, although in many cases lack of food lies at the root of the mischief.

It is well known that the percentage of defects among dull children is greater than among normal children or bright children. There is a distinct correlation between physical defectiveness and slow progress. In so far as malnutrition is related to the various defects of school children, it is responsible for an increased expenditure for educational purposes. It is generally conceded that promotion can hardly be expected unless children have been in attendance at least three quarters of the school year.

Chronically underfed children are vulnerable to contagious disease and susceptible to protracted colds. Their poor musculature and sluggish circulation make them more likely to fall victims to the various diseases to which they are exposed through the intimacy of school life, and as a result their absences are more numerous. For the same reason their convalescence is retarded, their complications are more numerous, and their loss of education and training through absence is far greater than that of other children of the same age in a better state of nutrition.

In Manchester, Connecticut, it was ascertained that of all the children who failed of promotion, 25 per cent. were suffering from malnutrition as opposed to 9 per cent. of those promoted. The difficulty of underfed children to give proper concentration and attention to school studies is responsible for decrease and interest and thus encourages truancy, with the increased cost requisite to maintain truant schools. The principals of Philadelphia schools have reported marked reductions in truancy following the introduction of school lunches. In Milan, the introduction of school lunches increased the average daily attendance from 72 per cent. to 94 per cent. This is indicative of a marked saving in the educational per capita cost per hour through the proper feeding of school children.

The percentage of retarded pupils in Boston varied from 22.1 per cent. in 1896 to 23.8 per cent. in 1901, to 18.5 per cent. in 1907. This is indicative of a serious situation, concerning which meager and unsatisfactory data are available. To whatever extent malnutrition contributes to this item, it is a burdensome cost to the community.

In the study of non-promotion in Boston for the half year June, 1910, it was indicated that 10.5 per cent. were retarded. Of the total 8,496 children failing of promotion, 2,049 were thus held back because of illness, defective vision, defective hearing, defective speech, deformities, adenoids, nervousness and mental deficiency. Among other causes were 2,803 cases of mental immaturity, 538 of laziness and 495 of inattention. There is no reference to the part

that malnutrition may have played in connection with any of the causes thus enumerated. This is not surprising, as the state of Massachusetts, in its reports of 1906 and 1907, does not even include malnutrition among the defects noted in the examination of 343,000 children. Furthermore, it is certainly probable that ill-health, in some form, was responsible for 25 per cent. of the retardation in Boston. It is probable that, in general, illness in one form or another, directly or indirectly, but not including physical defects, was responsible for nearly 25 per cent. of absences from school, from 10 to 15 per cent. of the elimination, from 10 to 12 per cent. of non-promotion each term, and for at least 10 per cent. of the retardation. Malnutrition is certainly a powerful factor as a fertile substratum for the development of disease.

That underfeeding must be regarded by educators as a circumstance worthy of their attention is obvious. The underfed child with devitalized body is likely to be lacking in all the essentials necessary for taking advantage of educational opportunities. This fact is impressed upon one in the light of the adoption of school feeding as part of the educational work in countries like Germany, France, Italy, Norway and Sweden. The cost of feeding children undernourished is minimum compared with the educational loss that results from attempting to teach underfed minds, together with a high cost, incident to the establishment of special classes for anemics, pre-tuberculous, truants and malnourished defectives. It is unnecessary to make a financial computation, because the costs vary in each city, but a study of this subject in individual cities would undoubtedly waken municipalities to the high cost of educating the underfed.

Ira S. Wile

New York City

THE USE OF THE GENERAL IN EDUCATION

It is becoming evident that unless we return to the *general* in college education our American students will soon come to look upon their college courses as just so many distasteful ordeals to be undergone in order to gain a certain intellectual standing in the world. It must be frankly admitted that very few college professors find their students enthusiastic over their subjects; only direct pressure on the part of the faculty compels the majority of students to take some subjects that have long been considered highly helpful in the pursuit of culture. What is wrong? There was a time when practically every student willingly listened to the professor of literature and when students gladly thronged into the classroom of the teacher of general science, or natural philosophy, as it was formerly called. Why do they to-day "sign up" with heavy hearts for course number so and so in English literature and enter the classroom in biology or botany or chemistry with "groanings that can not be uttered"?

This or that reason or remedy is offered; but I believe that the only remedy is a return to the *general* and a forsaking of the technical and specialized by the undergraduate professor. What is needed is a *general* course in science, a *general* course in literature, a *general* course in arts, so that the relationships of all kinds of sciences, arts and literatures, the main principles common to all kinds, may be emphasized. I considered it a genuine calamity when one of the universities in which I was educated split its old-fashioned chair of general science, or Natural Philosophy, into various technical and specialized chairs of science. It meant that no more would the students come forth with a fairly clear idea of the general arrangement of principles

that govern the material world. It meant that thereafter the professors in that university would attempt the hopeless task of making specialists out of sophomores.

Many of the younger set of professors will protest that such knowledge as is gained by the general course is *not accurate*, and that it is merely *vague* and not usable. What difference does it make if it is not minutely accurate and is vague? Is every student in the class going to be a chemist, and must he be made to know absolutely without flaw a certain section in chemistry or a mass of detailed, technical points? Is every student going to be a botanist or a biologist, and must he be required to do the work or follow the methods of the specialist in such subjects? Frankly, for the thousands of average students in our colleges would not the general idea—the *vague* idea, if you please—gained from a non-technical survey of the entire field of biology or botany or chemistry serve just as well, yes, even better than this boresome mastery of some minute bit of the field?

Why should students in college, there for general education and not intending to be specialists in mathematics, be compelled to spend a full year, for instance, on trigonometry or a full year on calculus if they are to be allowed to take any mathematics at all? Why not give a student enough of trigonometry *to show him what it is about, what its relations to the actual work of the world*, and then let him pass to a similar survey of calculus? Perhaps after eight or ten weeks of each he could work only a few problems; but he would have satisfied that normal curiosity that every healthy intellect has and he would have gained toward life that *general mathematical attitude* so useful to most men.

I have forgotten all the symbols and formulæ I studied in mathematics; but there remains with me, I trust, *the mathematical frame or turn of mind* which can not but affect my thoughts and actions in daily life. About all I remember of my chemistry is the two symbols H_2O and H_2SO_4; but I believe that I have what might be called the *chemical turn of mind;* that is, I have the general idea of what acids, alkalies and their combinations will do, and a magazine account of experiments in hygiene, or food mixtures, or explosives, is not all Greek—or chemistry—to me. I have forgotten practically every history date I ever knew; but still I have the *history turn of mind* which shows me what has made nations rise or fall. In short, the number of facts any one individual carries about in his head is astonishingly small; and a so-called educated man carries but very few more than an uneducated man. But the educated intellect carries at all times *a great number of general impressions*, recollections of general principles, vague notions, if you will, that at any moment may be called forth from the subconsciousness to be applied to some particular event or problem. Just there is perhaps the main distinction between the cultivated and the uncultivated intellect—the amount of general notions and impressions lying in wait for their opportunity to meet an emergency. And yet, our college courses are becoming more and more the investigation of the *exact and limited fact* in some highly exact and strictly limited field, and our students have to be driven into biology, botany and chemistry.

Nor is it very much better in the languages and literatures. Latin and Greek are called the dead languages, but they did not die a natural death; they were murdered by the college professors and philologists. There is no more reason why Latin should have died than that history should have died; both deal with the past and with things, notions and symbols that are gone

forever; but the history teacher showed the relation of his subject to modern life, and the Latin and Greek teacher did not. The latter became so busy with the declensions and conjugations and other technical details of the subject that he forgot to show that Latin and Greek are mirrors of the life of a people who once lived just as vigorously and enthusiastically as we do.

The great universities are the worst sinners of all in this matter. In some of our larger institutions such general subjects as botany, biology, chemistry and literature are so divided and subdivided into this or that technical portion or phase that the undergraduate can not possibly take *all* the courses in any one science, and he frequently comes forth without ever realizing the *whole general drift of the subject.* I am informed that one of the leading schools of journalism in this country could not obtain among the regular undergraduate courses of the university those general surveys which give non-technical culture and a general—*vague,* some would say—grasp of the subject, and was, therefore, compelled to establish its own chairs of general literature, general science, and general art in order that the future newspaper workers might know the broad basic principles of life, matter and thought. I am also informed that the trouble now in that school of journalism lies not in driving their own students into such courses, but *in keeping out the students of the regular college of arts and sciences* who are seeking to escape the frenzied specialists who can teach only some petty phase of a general subject.

Some of these specialists would doubtless sneeringly reply that the students tried to get into these general surveys because such courses are "snaps." Not necessarily. Perhaps the students see in these general courses something that answers their hunger—their normal curiosity to know, in outline, *the general field* before trying to dig pot-holes in some remote corner of it. It is a pitiable condition when the institution from which all knowledge is supposed to flow down to the general masses refuses or is unable longer to teach the "first principles," the fundamentals, of earthly or universal activities. In recent years much fun has been poked at the small denominational or privately endowed colleges scattered throughout the country, and the finger of scorn has been pointed at the small number of their courses and the lack of "famous specialists" in their faculties; and yet these institutions are probably turning out graduates with better rounded ideas of *fundamental principles* in biology, chemistry, physics and botany and the general relations of these sciences than are possessed by the graduates of the great institutions with their subdivided and technical subjects. Surely, *the first duty of a college is to equip a man with some general notions that can be applied to a large number of instances and emergencies.*

Perhaps the reason that we have no Leonardo da Vinci to-day is that we do not produce educated men with a *general, broad knowledge of several allied subjects.* To-day if we want an excellent bridge built we have to call in two men—a bridge engineer to make it usable, and a bridge decorator to prevent its being an eyesore to the community. Leonardo would have attended to both jobs, and would have constructed a bridge strong, but suggestive of some ideal of beauty.

The very quality that Leonardo so eminently possessed—the very quality that the general courses would develop, namely *imagination* or *vision*—is sadly lacking in our college students of to-day. The freshman may possess a slight amount of it—he sometimes shows it in his examinations—

but the average upper classman has no more imagination than a hitching post. It is astonishing as well as disappointing to note how seldom in the biological, botanical or chemical laboratory the student's mind *leaps to meet the conclusion* toward which he is working. And yet to be a successful scientist or to have even the scientific turn or frame of mind, the intellect must use imagination to foresee a possible conclusion before attempting to work toward it step by step.

I remember that as a college student I carried out in my study of physics certain experiments in the measurement of the velocity of light, and to this day I do not know what I was about, or what their purpose was. After working several hours with an instrument and figuring according to certain formulæ I was told by the professor that I had done the work with approximate correctness and was given a good grade. That man was so immersed in the technicalities and remote phases of his subject that he could not give an intelligible *general course* in physics, and had, therefore, never given me the vision of what the whole business was about, nor stirred my imagination so that it might see possible problems to be solved, and possible solutions for them. As a college student I studied trigonometry for nearly an entire year and passed the examination, and now, nearly twenty years afterwards, I learn for the first time, from a half-hour informal talk by a professor in a faculty club, what it was all about, and how it enters into the life of man. My own professor of mathematics should have cast his dull, difficult book aside for a while, given us some of the *history* of trigonometry, *some of the ways in which it cuts into the world's daily activities,* and what its *general purpose* is, and then, with our imagination awakened, my fellow students and I might have been able to see what the gist of the matter was, and what the possible solutions of elementary problems were. I took that course because the faculty said it led to *mental discipline* and *culture;* it became the mere mechanical drudgery of making my answers agree with those given in the back of the book. To have made that course really cultural the professor should have presented the subject in *general outline,* and should have asked us to work out some of the elementary problems according to the simpler principles governing the subject, and, our normal curiosity having been satisfied as to what trigonometry *dealt with,* we should have passed on to some other phase of mathematics. My colleagues and I were not going to be bridge builders or mining engineers or even surveyors; why should we have had inflicted upon us, in the name of *culture,* so vast a mass of details that we lost the drift of the entire subject?

We must return to the view that we college professors are dealing with *average* intellects—with persons who may not intend to be engineers, architects, expert chemists, botanists, or biologists, but who, in all probability, will be merchants, travelling salesmen, brokers, farmers, bankers, county office-holders, or clerks. It is the object of the undergraduate college of liberal arts and sciences, not to produce expert specialists, but *to raise the general average of public intelligence.*

The general course in any and all subjects is the only effective agency toward this end. If the college professor objects on the ground that such courses are too vague, let him disillusion himself; the students are now departing from his detailed technical courses *with even still more vague ideas* about the whole business. The attitude of mind—that is the gist of the affair. Are we sending forth these young people with a sneer, an indifference, or even a posi-

tive dislike for any branch of learning, or are we sending them forth with an aroused curiosity that will make them continue to seek knowledge along these lines after their college days?

CARL HOLLIDAY
UNIVERSITY OF MONTANA

THE PUBLIC LIBRARY AS AN INDEX OF CULTURE

Two recent studies of distinguished Americans[1] showed beyond any reasonable question that New England has made a contribution of eminent persons far out of proportion to her population. This was particularly true in the earlier decades of the nineteenth century. Not only was an unusual contribution of distinguished Americans made by New England as a whole, but the number of distinguished persons per one hundred thousand of population was much larger in every New England state than in any other state in the union. So decisive was the advantage of New England that Rhode Island, the New England state with the lowest proportion of distinguished persons per one hundred thousand population, was 30 per cent. above New York, the state which, outside of New England, had the highest proportion of distinguished persons per one hundred thousand population.

These facts were true of the first ten thousand native-born persons listed in "Who's Who" for 1912–13. A study of the first two thousand persons listed in "Who's Who" for 1914–15, native-born since 1870, showed that while New England's preponderance was less noticeable than it had been during the earlier decades, it was still remarkable.

[1] "The Geographical Distribution of American Genius," Scott Nearing, *The Popular Science Monthly*, August, 1914; "The Younger Generation of American Genius," Scott Nearing, *The Scientific Monthly*, January, 1916.

This evidence furnishes at least a measure of justification for New England's claim for recognition as the culture center of American life. Accept the fact. The question of cause remains an open one.

There is no way in which to prove conclusively that this factor or that factor in the life of New England has been primarily responsible for her supremacy in the production of distinguished persons. Undoubtedly her fecundity in this respect may be traced to a number of sources. This paper concerns itself only with the question as to whether there is any possible relation between social achievement and the provision of library opportunities.

There is a sense in which the school may be looked upon as a fairer test of community opportunity than the library. The school is compulsory. It impresses people most during their most impressionable period. On the other hand, the library reaches old as well as young. Once established, it remains as a center for the distribution of knowledge and hence of opportunity.

New England for generations has held a position of unchallenged supremacy as a producer of distinguished Americans. There is no other public institution which is more permanent in character, and about which more accurate data can be secured than the library. Hence this study of the relation between public library facilities and culture supremacy.

The United States Bureau of Education issues a bulletin[2] which contains a list of public libraries with the number of books in each. College libraries and private libraries are not included in this list. They would, of course, be a modifying factor. The term "library" when used in this paper will refer to the public library.

[2] United States Bureau of Education, Bulletin 43, 1915, Educational Directory.

A general statement of the total number of libraries and the libraries per million of population in the various geographic areas of the country will be found in Table I.

TABLE I

Total Number of Public Libraries with the Number of Libraries per Million of Population by Geographic Divisions

Divisions	Total Libraries	Libraries per Million Population
New England	436	67
East No. Central..	306	17
Middle Atlantic ..	212	11
West No. Central..	140	12
Pacific	87	21
Mountain	46	17
South Atlantic ...	34	3
West So. Central..	25	3
East So. Central..	17	2
United States ...1,302		14

The record of public-library distribution as revealed in this table is striking in the extreme. New England with less than one tenth of the total population of the country contains one third of all of the public libraries. Her population in 1910 (six and one half millions) is less than one third of the population of the Middle Atlantic states, and about one half the population of the West North Central states and the South Atlantic states. The total number of her libraries is greater than the total for the Middle Atlantic states, the West North Central states and the South Atlantic states combined. If the North Central states are excepted, New England has as many libraries as the remainder of the country.

The surprisingly large number of free public libraries in New England is effectively shown by a comparison between the total number of people in the larger geographic areas and the total number of libraries in the same areas.

The relative importance of New England in the provision of free public libraries is strikingly shown by a diagram in which the various geographic divisions are arranged in accordance with their provision of library facilities.

The relative number of libraries in New England is well brought out in the figures showing libraries per million of population. The ratio for New England (67) is six times that of the Middle Atlantic states, four times that of the East North Central states, twenty-two times that of the South Atlantic states, thirty-three times that of the East South Central states and three times that of the Pacific states, which rank next to New England in the proportion of libraries per million of population.

The northeast and the far west come first in their library opportunities. The northern belt of states ranks far behind New England and slightly behind the West Coast states. The South is hopelessly in arrears.

The same facts are brought out by an examination of the figures showing the number of books in the various libraries.

TABLE II

Total Books in Public Libraries and Number per Thousand of Population

Divisions	Total Books	Books per Thousand Population
New England	9,784,845	1,493
Middle Atlantic	9,144,211	467
East No. Central....	8,425,042	462
West No. Central....	3,338,062	250
South Atlantic	1,271,774	108
East So. Central ...	946,586	106
West So. Central....	609,784	66
Mountain	932,203	444
Pacific	2,765,033	575
United States 37,217,524		406

The lead of New England, as shown by the number of books in her libraries, is less decided than the lead which appears from the number of libraries. The number of books in the libraries of the Middle Atlantic and East North Central states is only slightly

less than the number in New England. The population, however, varies so greatly that in ratio of books per thousand of population, New England has more than three times that of either of the other sections.

The northeast and the far west are again in the lead, although the ratio is nearly three to one in favor of New England. The lead of New England in its library facilities is as well established as was its lead in the production of distinguished persons.

TABLE III

Total Libraries, Libraries per Million of Population, Total Books and Books per Thousand of Population in the 25 States Having the Highest Proportion of Libraries per Unit of Population

States	Total Libraries	Libraries per 1,000,000 Population	Total Books	Books per 1,000 Population
New Hampshire	49	114	747,158	1,734
Vermont	27	76	409,185	1,149
Massachusetts	224	66	6,120,576	1,818
Connecticut	67	60	1,349,652	1,211
Maine	40	54	622,852	839
Rhode Island	29	53	535,422	986
Nevada	3	37	96,300	1,174
Montana	13	34	241,547	643
California	73	32	1,984,924	835
Wyoming	4	27	68,500	462
Iowa	52	23	905,755	407
Wisconsin	49	21	966,928	419
Arizona	4	20	42,141	206
Indiana	54	20	1,048,961	388
Colorado	14	18	322,887	404
Michigan	52	18	1,410,719	502
Illinois	86	15	2,779,985	493
Kansas	26	15	389,911	231
New Jersey	39	15	1,339,142	527
Ohio	65	14	2,218,449	465
Nebraska	16	13	376,385	315
Minnesota	24	12	714,316	344
New York	112	12	5,794,348	635
Delaware	2	10	130,268	645
South Dakota	6	10	85,357	146
United States	1,302	14	37,217,524	406

A comparison by individual states shows that all of the New England states show up well in the proportion of public liraries and of books per thousand of population. The first six states arranged in the order of the fecundity in distinguished persons were the six New England states. The same thing is true here. State for state, each of the New England states is ahead of all of the other states in the provision of library facilities.

The first six states in Table III. are the six New England states. The highest proportion of libraries to population is in New Hampshire. The lowest is in Rhode Island. The ratio here is 53 libraries per million of population. The difference between this ratio and that of the next highest state —Nevada—represents a drop of 30 per cent. Nevada has only three libraries—this compared with the very small population of the state makes its ratio high. Montana has 13 libraries; California 73. All of these states fall far below the lowest ratio for New England.

New York, the largest state of the United States, is number 23 on the list of states. Pennsylvania, the second largest state in the country, does not come in the list at all. It has 61 public libraries, with a ratio of only 8 per million population. It is number 28 in the total list of states. None of the southern states fall within the list.[3]

The superiority of New England's public-library facilities is apparent without further argument. It is interesting, however, to note the relation that exists between the number and size of the cities, and towns, and the library facilities in various parts of the community. It is at least possible that New England's library oppor-

[3] The figures for the District of Columbia have been omitted. There are in the District 25 public libraries, containing a total of 4,578,909 books. This makes a ratio of 13,834 books per thousand of population. The situation in the District of Columbia is of course wholly unrepresentative, since the libraries are U. S. libraries, maintained for the most part by government departments, and have no immediate relation to the population of the city.

tunities are due to the large number of cities and towns found there.

The relation between free libraries and town population appears in Table IV. The great bulk of cities and towns are relatively small. Half of them contain between 2,500 and 5,000 people. Three fourths of them contain less than 10,000 people. The bulk of the libraries are also small. Two fifths of them contain less than 10,000 volumes. Another third contain from 10,000 to 25,000 volumes. There are 49 cities with over 100,000 inhabitants, and 59 libraries with over 100,000 volumes.

TABLE IV

Percentage of Towns and Cities with Specified Population for each Geographic Area; Percentage of Libraries with Specified Number of Volumes for each Geographic Area, Together with the Totals for the United States

Divisions	Per Cent. of Towns and Cities with Population of (1910)			Per Cent. of Libraries with Volumes (1915)		
	25,000 and Over	5,000–25,000	2,500–5,000	25,000 and Over	10,000–25,000	Under 10,000
New England...	19	17	13	27	37	34
Middle Atlantic.	24	22	19	18	15	16
East N. Central.	21	24	19	22	23	24
West N. Central.	9	10	14	9	9	13
South Atlantic..	9	9	9	5	3	2
East S. Central..	4	5	6	4	1	—
West S. Central .	6	6	10	3	1	2
Mountain.....	3	4	5	4	5	3
Pacific.....	5	3	5	8	6	6
United States	100%	100%	100%	100%	100%	100%
(Totals).....	228	1,002	1,172	282	432	589

New England stands out remarkably in all of the comparisons which this table makes possible. With one fourteenth of the population of the country, New England has one third of the total number of libraries. Eight of the 49 cities with over 100,000 population are in New England. Fifteen of the 59 libraries with over 100,000 volumes are in New England. There are 42 cities in New England (19 per cent. of the total for the United States) which contain over 25,000 people. There are 76 libraries (27 per cent. of the total) which contain more than 25,000 volumes. The number of cities in New England with from 5,000 to 25,000 population is 167 (17 per cent. of the total). The number of libraries with 10,000 to 25,000 volumes is 160 (37 per cent. of the total).

The same relation appears between the smaller towns and the smaller libraries. One hundred fifty-three (13 per cent.) of the cities and towns with from 2,500 to 5,000 inhabitants are in New England. Thirty-four per cent. of the libraries with less than 10,000 volumes were in New England.

In every case the proportion of libraries found in New England is greater than the proportion of towns found there.

It is interesting to note that the ratio is higher for small towns than for large ones, indicating that the supremacy of New England in the provision of library facilities is particularly great in the smaller centers of population.

The other geographical divisions group themselves with regard to city frequency and library frequency very much as they did in the earlier tables. The Middle Atlantic states, the West North Central states, the South Atlantic states, the East South Central states, and the West South Central states show a lower ratio of library frequency than of city frequency. The East North Central states, the Mountain states, and the Pacific states show a higher ratio. This is particularly noticeable in the case of the Pacific states. Here as in the earlier tables, New England appears to stand first in the proportion of library facilities, and the Pacific states second.

Public library facilities are provided more abundantly in New England than in

any other part of the United States. Indeed, the supremacy of New England in this respect is quite as astounding as was her supremacy in the production of distinguished persons. Whether any causal relation exists between the two, it is at least worth noting that in the section of the country which shows the greatest fecundity in community leaders there should also be found the most extensive provision of public-library facilities.

SCOTT NEARING

UNIVERSITY OF TOLEDO

EDUCATIONAL EVENTS

EDUCATION IN MEXICO

DAVID LAURENCE, the correspondent of the New York *Evening Post,* writes from Mexico City that opening schools and planning a uniform system of education that will take hold throughout the republic is neither a spectacular nor dramatic affair. It doesn't get headlines. But while in Mexico to-day it would seem that improvement of living conditions, and a stabilization of the central government were the most pressing and urgent things to be done, it is gratifying nevertheless to discover that First Chief Carranza is personally assisting in educational reform in Mexico, is directing that liberal appropriations from the funds of the central government be made for teachers' salaries and new schools, and is also supervising the expenditures as much as possible so that there may be no waste. Andres Osuna, who is general superintendent of education in Mexico City and is an intimate friend of the first chief, having been at the head of the board of education in the latter's native state—Coahuila—makes it his business to consult the first chief at least twice a week. Osuna is said to have the confidence of the first chief. He also is thoroughly familiar with American systems of education, both in the primary and secondary schools and colleges, being himself a graduate of Bridgewater Normal School, at Bridgewater, Mass., and having received B.A. and M.A. degrees at Vanderbilt University, Nashville, Tenn. He has lived for many years in the United States and knows the value of the American plan of education.

While most Mexicans look suspiciously on all plans for cooperation with the United States, Osuna has no such fear. He is in contant correspondence with educators in the United States, seeking for Mexico the best that it is possible to get for existing conditions in the disturbed republic. Perhaps the most interesting development in this line is the effort of Stanley Yarnell, of the Friends' School, Philadelphia, who has launched a plan for university scholarships in leading universities and colleges in the United States for deserving Mexican students. Already about fifteen to eighteen scholarships have been obtained, and nearly twenty other colleges have endorsed the plan. Some institutions have offered full scholarships, board, tuition, and all. Others have given tuition and suggested opportunities for student self-support. Catalogues and literature from American colleges have been sent to the Department of Education in Mexico City for general distribution, and the Mexicans are said to be quite enthusiastic about the plan.

General Carranza has given his consent for a delegation of Mexican teachers to accept the invitation extended by the National Association of Teachers to attend their next meeting in the United States. Unfortunately, the vacation for schools in Mexico comes in January and February, so it is difficult to obtain leave of absence for many teachers, but at least twenty-five will make the trip.

STATEMENT OF PRINCIPLES OF CHICAGO TEACHERS

BELIEVING that Illinois should be abreast of the most progressive states in educational policy, the Chicago Division of the Illinois State Teachers' Association urges the passage of certain additional laws which seem fundamental. While there has been no new legislation since our meeting one year ago, committees and organizations have been at work planning progressive measures, and we are looking forward to their early adoption.

The tendency manifest in various parts of the state within the last year of dropping

teachers, principals and superintendents without warning, or an opportunity for a hearing, emphasizes the need of a law providing a long tenure of office and a tenure of position for principals and teachers to be terminated only after notice and a hearing.

We call attention to the necessity for the following:

1. A greater extension and strengthening of the unit system of vocational education.
2. A more specific enumeration of the powers of boards of education, and the status and duties of superintendents and teachers.
3. A provision for free text-books.
4. A still larger use of the school plant.
5. A restoration of the two-mill tax.
6. A minimum wage law for teachers.
7. Adequate provision for pensions for all teachers in public educational institutions not now included under the present laws.

We believe the function of the school is the betterment of the child. In this work, the home and the school must join. The child must be trained morally and socially, as well as physically and mentally; and the ultimate aim in all child training must be to develop a desire for service.

We believe that the work of the teacher should be considered and made a profession, that the teacher's position should be one of dignity surrounded by an atmosphere of freedom for self-expression and growth, and that the teacher should occupy a position in the community as a citizen among citizens.

THE MALDEN PLAN FOR RELIGIOUS EDUCATION

THE Malden School of Religious Education, as we learn from the *Journal of Religious Education,* has developed from a conviction on the part of many of the active church leaders of Malden that an adequate program of religious education for the children of a community involves many problems which can only be solved by community cooperation. Chief among these problems is the training of religious teachers and leaders for the Sunday-schools, week-day religious schools, mid-week recreational activities, and other religious agencies. The establishing of the Malden School of Religious Education is the initial step in a program which will gradually develop into a thoroughly coordinated system of religious education for the city of Malden.

Professor W. S. Athearn is the director of the Community Training School. Professor N. E. Richardson also works in this school. The following outline will suggest the work proposed by the Malden Council of Religious Education:

I. The development of a city system of religious education, including:
   (*a*) A city board of religious education, analogous to the board of education of the public schools.
   (*b*) A city superintendent of religious education.
   (*c*) A city training school for leaders, including observation and practise teaching.
   (*d*) Common educational standards for the guidance of the church schools in the city.
   (*e*) A system of week-day religious schools. This step involves:
      1. An adequate supply of trained lay teachers.
      2. A curriculum suited to the needs of the various grades and related to the program of Sunday instructions.
      3. An enlightened public sentiment which will insure the necessary moral and financial support, and prevent misunderstandings and partisan controversies.

II. The unification of all child-welfare agencies of the city in the interests of the largest efficiency.

III. The supervision of a complete religious census of the city with special reference to the religious needs of children and young people.

IV. The direction of educational, industrial and social surveys for the purpose of securing the facts upon which a constructive community program can be based.

V. The study of the recreational and social conditions of the city, the training of local leaders, and the building of a scientific, well-balanced program of

work, study and play for the children of the city.

VI. The creation of a community consciousness on matters of moral and religious education.

With the launching of the Malden School of Religious Education the first three items in the above outline will be complete. The board of religious education has been formed and Miss Grace Jones, supervisor of practise teaching for the department of religious education of Boston University, has been employed as city supervisor of the religious schools of Malden. Her services will be freely given to any church or society wishing to standardize or improve its religious instruction.

THE UNIVERSITY OF ILLINOIS HIGH SCHOOL CONFERENCE

ACCORDING to *School and Home Education*, although all the returns are not in from some of the precincts—no, sections—the total registered attendance at the high-school conference recently held at the University of Illinois was 1,562. Professor Hollister is still receiving registration cards and an estimate of 1,600 would probably be conservative for the total attendance. Three hundred and twenty-eight public high schools were represented. The number of high-school teachers in attendance was 1,326. Colleges, academies, normal schools, school boards and county superintendents joined in furnishing 99 conferees. By comparing with last year's figures it will be seen that there was a growth in attendance of about 200; that there were 25 more high schools represented.

The university authorities are already making plans to provide for an attendance of at least 2,000 next year. It is evident that the conference will include at least 50 per cent. of the high-school teachers of the state in a few years.

A new section, physical training, has been organized. It is felt that another group must be organized to discuss the junior high school. The problem of finding a sufficient number of suitable rooms is becoming more pressing every year. It is expected that next year the larger sections will utilize the Y. M. C. A. building and some of the churches. This year the English section was the largest single section with a registration of 244. The mathematics, classics and social science sections came next with 121, 118 and 117 respectively.

"As to the quality of work done," stated H. A. Hollister, the high-school visitor, "all expressions I have heard are emphatically commendatory. Personally, however, I am convinced that we are still far short of the possibilities. It seems to me that what we have here started going is one of the most effective and far-reaching forms of extension work that the university could possibly undertake, and that, too, on the most economical basis possible."

IN MEMORY OF DR. JOHN H. HAAREN

AT a meeting of the New York Academy of Public Education, held in the College of the City of New York, November 16, 1916, on motion of District Superintendent Henry E. Jenkins, seconded by District Superintendent Joseph H. Wade, the following minute was adopted by a rising vote:

Moved by a keen sense of the loss sustained by the public-school system of the City of New York, and by a sense of personal and professional bereavement, the New York Academy of Public Education desires here to place on record its expression of grief and sorrow at the sudden death of one of its most faithful and interested members, Dr. John H. Haaren, associate superintendent of schools, of the City of New York, and former vice-president of the New York Academy of Public Education.

For thirty-five years Dr. Haaren had been in the service of the public schools of this city, filling every position from that of class teacher to the membership of the board of superintendents. This service embraced practically all of the school multifarious activities, day and night. His reputation as teacher and supervising officer was not confined to the city to which his service was chiefly given. His active interest in all that pertained to the development of education of youth had extended to the furthest bounds of this country, and his influence among the teaching body generally was strong, as was shown by his personal and official prominence in many associations of teachers.

At the time of his decease he was engaged in carrying forward a great new experiment, "The Cooperative System of Education," which was to

form the connecting link between the schools and business life. At one of the recent meetings of the "Academy" he presented a paper for discussion which gave in brief, succinct form, an account of this experimental work, and a presentation of the great fields of investigation that it opened. He was one of the very few in our profession who have had the rare opportunity of introducing a new educational development.

Perhaps his greatest assets were his kindly simplicity, his equanimity of temperament, his safe and sane outlook on the enthusiasm for the new, and his ability to carry to successful conclusions, plans, that in another hand might have been hindered by friction and defeated by temperament. He spared no pains to find a firm and impregnable basis for the theories he endeavored to carry into practise. Always a student, and in many fields of investigation, his mental processes were kept at a high degree of efficiency that years did not impair.

He was one of the leading members of the New York Academy of Public Education and had been one of its vice-presidents. He was deeply interested in the future of the "Academy," and believed that it would have a marked effect on modern education. He was, above all, a close, intimate, personal friend of many of us, and it is not only a professional regret, but a personal sorrow, that this brief record represents.

EDUCATIONAL NOTES AND NEWS

MR. HERBERT FISHER, vice-chancellor of Sheffield University, has been appointed president of the Board of Education of Great Britain.

JOHN WESLEY HILL has been elected chancellor of Lincoln Memorial University at Cumberland Gap, Tenn. Dr. Hill has resigned the general secretaryship of the World Court.

DR. R. A. MILLIKAN, of the University of Chicago, will henceforth give three months each year to research work at the Throop Institute of Technology, at Pasadena, in collaboration with Dr. A. A. Noyes, of the Massachusetts Institute of Technology, and Dr. George E. Hale, of the Mount Wilson Solar Observatory. This arrangement is made possible by the gift of $100,000 recently announced for physical research, and by the establishment of three fellowships, paying $1,000 a year, to be shared by the research departments in physics and chemistry.

RALPH CUSHMAN, JR., for several years a teacher in the Haverhill High School, has been appointed superintendent of schools in Nahant. He will fill the vacancy caused by the death of John W. D. Chester, who was killed in an automobile accident on November 23.

MISS CANDIS NELSON, of the education department of the State Normal School of Valley City, North Dakota, has been appointed supervisor of training at the Madison, South Dakota, State Normal School.

THE *Cornell Alumni Weekly* gives the following information in regard to professors of the university who are serving with the French army: Professor Guerlac is now in charge of a hospital for crippled soldiers not far from Paris. He had just heard from Lieutenant Jean Hébrard, formerly professor of design in the college of architecture. Lieutenant Hébrard had been in active service in the Verdun section. He had just been slightly wounded on the head by a fragment of a bomb, and had been sent to a hospital. His brother, also an officer, had been for a long time a prisoner in Germany, but had just obtained his release in some way and had returned to France. Professor Guerlac had also heard from Professor Georges Mauxion, who was Professor Hébrard's successor here. He had been seeing active service and had had a narrow escape. He was buried in a trench by the explosion of a shell, but his comrades dug him out before he was suffocated.

THE board of Education of New York City, has adopted by a vote of 23 to 8 the resolution introduced by Professor Franklin H. Giddings, of Columbia University, establishing the office of executive manager of the board at a salary of $10,000 a year.

THE New Eau Claire (Wis.) State Normal School was dedicated recently. The presidents of all the normal schools in the state, Governor E. L. Philipp, and State Superintendent C. P. Cary took part in the ceremony.

THE exercises incidental to the breaking of ground for the building of the school of education at the University of Illinois were held

recently. The first spadeful of earth was turned by State Superintendent Francis G. Blair. Among the speakers at the exercises were: President Edmund J. James, Hon. Francis G. Blair, Professor James M. White, who was the supervising architect, Professor C. H. Johnston, Dean K. C. Babcock and Professor W. C. Bagley.

The Rhodes Scholarship Committee of Pennsylvania has selected Ordean Rockey, a student of Pennsylvania College, Gettysburg, Pa., for the Rhodes Scholarship for 1917.

Carl W. Messenger, Princeton, '14, and at present a member of the faculty of St. Paul's School, has been awarded the Rhodes Scholarship for New Jersey.

A statue of General Webb, former president of the College of the City of New York, will soon be placed on the campus. The Municipal Art Commission has approved of the site. J. Massey Rhind, the sculptor, originally designed the statue for the New York State Monument Commission to be placed on the Gettysburg field. The alumni have secured a replica of the statue as a token of esteem of their former president who served the college for thirty-three years.

Dr. James Monroe Taylor, president-emeritus of Vassar College, died in New York on December 19, of pneumonia, in a hotel where he had been ill about a week. Dr. Taylor was the fifth president of Vassar. He was born in Brooklyn, on August 5, 1848, and was graduated from the University of Rochester in 1868, and three years afterwards completed his course at the Rochester Theological Seminary. For two years he traveled and studied in Europe; then he accepted a call to the Baptist Church at South Norwalk, Conn., and in 1882 went to Providence, where he remained until his election in 1886 as president of Vassar. Strong Hall, the library building and the alumnæ gymnasium were among the additions to the college which Dr. Taylor was instrumental in obtaining during his incumbency. He was the author of several books and had received degrees of D.D. from the University of Rochester and Yale University and of LL.D. from Rutgers and Smith Colleges. He was a trustee of the Carnegie Foundation Advancement of Teaching.

Dr. Naomi Norsworthy, associate professor of educational psychology at Teachers College, Columbia University, died on December 25.

The Rev. Charles E. Hart, professor emeritus of ethics, evidences of Christianity and English Bible at Rutgers College, died on December 15, at his home in New Brunswick, N. J., aged seventy-eight years.

Dr. Walter B. Gunnison, principal of Erasmus Hall High School of Brooklyn, died on December 19.

Alonzo Meserve, a school teacher for more than half a century, and for twenty-eight years principal of the Bowdoin School, Boston, died on December 11, after an illness of ten months.

J. L. Meriam, professor of school supervision at the University of Missouri, gave an address in Chicago, on December 13, under the auspices of the Joint Committee on Education, representing about thirty educational and social clubs of that city. This organization aims to arouse intelligent interest in public schools. Mr. Meriam discussed the work of the university elementary school, which is described by Dewey in his "Schools of To-morrow."

William Francis Hillebrand, Ph.D., chief chemist of the Bureau of Standards, Washington, D. C., gave the Chandler lecture on November 27, 1916, at Columbia University, on "Analytical Chemistry and its Possible Future."

The annual lectures on the Barbour-Page Foundation at the University of Virginia will be delivered in January by Professor John H. Wigmore, dean of the law school of Northwestern University, whose subject will be "The Growth of Law."

Professor James Harvey Robinson, of Columbia University, will give two lectures on the changed attitude toward history before the Society for Ethical Culture, New York City, on Wednesday evenings, January 5 and 12. The lectures will be under the auspices of the Federation for Child Study.

VALPARAISO UNIVERSITY has received a gift of four hundred acres of land, valued at over $50,000, from Mr. William E. Pinney and Miss Myra Pinney, for the use of the department of agriculture.

IT is announced from Winfield, Kans., that Southwestern College has completed an endowment fund of $665,000.

IT was announced at the annual meeting of the Court of Liverpool University that a gift of £10,000 had been made by Professor and Mrs. Herdman for the endowment of a chair of geology in memory of their son, who was killed in action. Another donation of £8,000 by Mr. Sydney Jones in memory of his father for a chair of classical archeology was also announced. The Lord Mayor said research of the greatest importance was going on in the university. It was a fairly open secret that there were not anything like sufficient inspectors to go around the vast number of munition works, and it was of great assistance to those in authority that they had in the staffs of universities competent and intelligent and scientific men to draw upon to do this difficult work. The pro-chancellor (Mr. J. W. Alsop) stated that the treasury had made them a special emergency grant of £7,500.

Two scholarships of £75 each are offered by "The Common Cause" (the organ of the National Union of Women's Suffrage Societies) to women who wish to qualify for positions as industrial chemists. Preference will be given to students willing to study at the Imperial College of Science and Technology, or the School of Technology, Manchester. Applicants, who must have a science degree or its equivalent, should send in their names to the Scholarship Secretary, "The Common Cause," 14 Great Smith Street, London, S.W., giving full particulars of their qualifications and of the course of research which they wish to pursue.

THE fifth annual Conference of Educational Associations is to be held in the University of London on January 1–6. The inaugural address is to be delivered by Mr. A. L. Smith, master of Balliol. Among the associations taking part in the conference this year are the School Nature Study Union, the Child Study Union, the Committee for the Development of Regional Survey, the Association of Science Teachers and the National Association for Manual Training.

THE University of Oxford has provided for the remission of university fees and dues in the case of matriculated Belgian or Serbian students, and the masters of the schools have announced that alternative questions to questions involving a knowledge of English weights and measures will be set on the arithmetic paper for responsions.

To meet the situation created by the enlistment of male teachers, 52 women students from Oxford University alone have gone to take posts in boys' schools—public, private, secondary and elementary. There is a woman teacher at Rugby. Thirteen women teachers have gone from Oxford to take the places of men in various universities, including London, Manchester, Glasgow, Aberdeen, Belfast and Nottingham. It is stated that of 315 vacancies filled by women from January to September, 1916, some 77 were for posts in boys' schools. According to the National Union of Teachers, approximately 22,000 male teachers have attested or joined the forces, and their places have been largely filled by women. In elementary schools under the London County Council alone there are approximately 1,400 women replacing men.

A BERLIN telegram, quoted in the London *Times*, states that Warsaw University has been opened with lectures preparing for the higher Polish administrative offices. Four hundred and fifty persons have applied for these posts, of whom about 100 will be admitted. Lectures will also be given as preparation for minor government offices.

COUNT IGNATIEFF, minister of public instruction in Russia, has forwarded to M. B. Sturmer, president of the council, a memorandum from the Russian universities setting forth their views as to the means of developing the intellectual relations between Russia and her allies. It is suggested that a general congress of the teachers of Great Britain, France and Russia should be held at Petro-

grad. The objects aimed at are the development of the teaching of English in Russian institutions for higher education; the sending of young Russian scholars and scientists to British and French universities; the creation of a post of "intellectual attaché" at the Russian Embassies in London and Paris; the organization of educational tours in Russia and Great Britain; and the establishment of a Russian Institute in Great Britain and of a British Institute in Russia.

Whether Harvard College has a right to transfer to the Massachusetts Institute of Technology a fund of approximately $22,000,000 created by the will of Gordon McKay to carry on the work in applied science in that university, will be determined by the full Supreme Court. The president and fellows of Harvard have asked permission to make the transfer, but its legality is questioned. The McKay trustees are Frank T. Stanley and George E. Gilbert. The McKay trusts were accepted in 1904 by Harvard. Since then, however, Harvard has felt that the Institute of Technology is better equipped to carry on the work and better results may be obtained, not only by reason of the improved facilities but by assembling a large body of students pursuing the same lines of study. The trustees oppose any transfer of the fund, declaring that the testator was prompted by a purpose to build a strong and efficient department of engineering education and research at Harvard University under charge of a Harvard faculty and under the exclusive jurisdiction of the university. Harvard has been paid already $2,447,261.12 by the trustees, who contend that the $22,000,000 which will be turned over finally will yield an income that will be sufficient to erect buildings and establish the plant that Mr. McKay had in mind at the time he executed his will.

The trustees of Mount Holyoke College announce that on account of the greatly increased expense of running the college, due to the higher cost of living, it is necessary to change the rates. Beginning with September, 1917, the rates for new students will be five hundred dollars ($500), covering tuition, room, board and laundry. The rates for students now in college will be as at present, four hundred and twenty-five dollars.

The District of Columbia Board of Education to-day issued an order forbidding the maintenance of high-school secret societies after the end of the school year in 1918. Initiation of new members hereafter was prohibited.

The eleven-months school term which has been discussed by the newspapers of the Missouri valley since its endorsement by the presidents of the valley universities at their meeting recently in Kansas City, has been in force in the University of Missouri for a number of years. At the university it is known as the summer session, which is a two-months term opening shortly after the close of the winter term. Missouri is the pioneer of the session in the valley. The only change which is suggested in the system when adopted by the valley universities is that from the division of the school year into semesters to a division into quarters—making the summer session the fourth quarter of the school year. The summer session of the University of Missouri will this next year be extended to include schools in which heretofore courses have not been given. The average enrollment of the Missouri summer session is more than 700. H. J. Waters, president of the Kansas State Agricultural College, expresses the belief that the eleven-months school year will soon be adopted by grammar and high schools.

DISCUSSION AND CORRESPONDENCE

TEXT-BOOKS IN ECONOMICS

The teacher of economics in the small college has a special interest in text-books. As a usual thing, the actual number of hours per week which he must devote to class-room instruction is far larger than his brother economist in the large university is called on to handle. The relations, moreover, which exist in a small college between students and teacher make inroads on his time which only the teacher who has lived the life can truly appreciate. He is therefore compelled, no matter what his inclination, to rely upon a text-book as the *pièce de résistance* of each course. There are teachers, of course, in the small

college who, having been infected during their years of graduate work with the disease of "lecturitis," relegate the text-book to the reserve shelf in the college library and affront their students with lectures *à la mode*. But the ordinary sober, conscientious college teacher uses a text-book wherever he can and his lectures are merely a by-product of the discussion. The success, then, of any course which he may offer depends not wholly, but largely on the quality of the text-book which he selects.

There are at least four well-defined types of text-books which the teacher of economics in the small college is compelled to use, if he attempts to give his students a well-balanced economic ration, that are not only exceedingly unsatisfactory to his students, but are also likely to become the cause of his untimely taking off. I have named these four types the Dehumanized-Mathematical type, the Book of Facts, the Pin type (out of respect to Adam Smith) and the Essay-Editorial type. Naturally there are the combinations of these four types, and, in addition, one can find subspecies of each. These need not, however, detain us since, properly considered in connection with the four main types, they are self-explanatory.

The Dehumanized-Mathematical type, as may be guessed, is largely theoretical in its nature. It represents the longing which some economists seem to have to oust the man from the economic life. This attitude was once characteristic of the student of criminology, who persisted in dealing only with crimes and in ignoring the criminal. It assumes that mathematics is the sole basis of the universe and that the more mathematical and abstract a science is the nearer it approaches to oneness with nature. The author forgets that:

> God moves in a mysterious way,
> Not always by the rules of algebra.[1]

Sometimes it would seem that all humanity, decency and common sense had been squeezed out of the people who figure in the book, leaving nothing but little calculating machines warranted to work only in accordance with the economic principle (whatever that may be) and capable of producing of themselves most astonishing results of the marginal variety. The denatured man that is there portrayed students fail to recognize as an acquaintance, and they are gradually induced through the desperate efforts of the instructor to believe that they have signed up for a course in imaginative quantities.

I pass now to a consideration of the Book of Facts (I almost called this the Book of Job), which represents the exact opposite of the Dehumanized-Mathematical type. Authors of this kind of text-books should be classed not as economists, but as collectors. An economic fact is for them a butterfly to be stuck through with a pen, enclosed within covers along with others in like misfortune, and then offered to the public as an object lesson in economics for the young. The labor of some of these collectors is astonishing. They have collected more facts than there are fishes which swim in the sea and each is supposed to yield up valuable information to the student, a thing which no fact ever does so long as it can get out of it. The college man is overwhelmed and his intellect completely shattered long before he has broken through the mighty host of facts. He is shot through and through, bayonetted, scalped and spit-balled while yet he struggles in the entanglements. The teacher is not in much better shape. He knows that his students have been vanquished and that it is for him to train his heavy brain artillery on these facts and blast them into smithereens. It is no easy task, and after spending long evening hours, often in ineffectual labor, he goes to bed and dreams of sticking the author in an air-hole in Dante's skating-rink.

Then there is the Pin type of text-book. This is a product of the minute division of labor existing in some of our large universities which the lecture habit fosters and perpetuates. In lecturing one has to explain every point and make each as clear as the noon-day sun. It takes but a few thoughts, if poured out in a slow and impressive way, to last a full hour. Special courses are therefore not only possible but are made absolutely nec-

[1] All rights reserved.

essary by the lecture method of instruction. A subject that could be adequately handled in two or three weeks under the college system of assignment and class-room discussion is spread out to cover a whole semester's work, and the lectures appear in the course of time as a text-book in economics. Students know well the quality of this kind of a text-book and do not hesitate to express their opinion of it to the teacher. He is helpless. The book is not a thing that can be cut; if it were, the problem would be simple. What it needs is to be subjected to a hydraulic pressure of two thousand pounds to the square inch, but this is a task beyond the power of the average overworked small college professor. All agree that there is some nourishment in hay, but the ordinary human animal can not eat enough of it to do him any good. Moreover, specialization robs the author of his economic birthright of a broad historical and philosophical background, and the book is made yet more unpalatable because it has no flavor.

Lastly, there is the Essay-Editorial type, really a double type, since the essay type, written by a professional economist, differs somewhat from the editorial type which is the product of a newspaper man. In the main, however, they may be considered as one, since each has most, if not all, of the objectionable features of the other. The Greek idea of proportion has been sinned against with fiendish results. Some chapters are abnormally long, simply because the author happened to be especially interested in a particular phase of the subject. Other chapters are skimped, though the problems discussed in each are just as important as those which the author has finally run to earth after the long and wearying chase. There are also gaps in the book; some of the most important parts of the subject may have been entirely omitted. Again, the essay is written from the research point of view, not from the angle of teaching. The newspaper man doesn't distinguish between the reader of his sheet and the college student. He knows no distinction, but the college student does. In the midst of his other laborious duties, the professor must pad out the hollow spots, jerk the figure into shape and pose it in such a way that the student will see only the noble outlines of the noblest subject of them all.

What does the teacher in a small college need in the way of a text-book? To begin with, it must be free from the defects which I have endeavored to portray in the preceding paragraphs. That is, the book must deal first of all with the efforts of human beings to make a living, for no distillate of the creature that has been made in God's image can be used as a substitute in the discussion of economic problems. The facts of the book must likewise be subordinated to thought, and the length of it must be determined by the ideas that go into it and not by a mechanical division of the college year. Lastly, the book must be written for college students, neither for research enthusiasts nor the man in the street, and proportion, it must be remembered, is the artificer of form.

A text-book free from the faults mentioned in the preceding paragraphs would have much to commend itself; but there are in addition a few positive principles which should also be observed. Economics must be looked at as a moral science. Conduct is the big thing in life, and it is the thing that students most like to talk about. Take away the moral side from economics and what is there left? Little that will interest a student. Until professional economists are willing thus to regard economics, they need not expect to have the influence on public opinion which the pseudo-economists, Karl Marx and Henry George, now have.

Through the book should shine the author's personality. He, too, is a human being earning a living, perhaps by the sale of this very book, and students are ten times more interested in him than in any one of the units which figure in his story. The intimate touch carries conviction.

A good text-book is a work of art, and it can not, therefore, be expected that all writers will travel the same road. But there are principles of text-book-making which all ought to follow. What is needed is a recognition of this

fact and a further development of the principles.

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QUOTATIONS

OXFORD AND ADVANCED STUDENTS

A STATUTE of unusual importance and significance will be promulgated in congregation at an early date next term. The statute is designed to promote the organization of graduate work by the creation of a new status of "advanced student" and the opening of the degrees of Doctor of Letters and Doctor of Science under certain conditions to such students.

The need both for the organization of advanced or postgraduate study and for the recognition of it by a higher degree is not a new one; and it has been accentuated by the advent of American Rhodes scholars who have already graduated at their own universities. The degrees that are open to them after two or three years of residence—namely, those of B.A. and B.Litt. or B.Sc.—have a comparatively inferior value in the states, where the Ph.D. (or some doctorate) has become as conventional and indispensable for academic appointments as the M.D. for medical practise. But the immediate occasion of the promulgation of a statute which has controversial aspects during the period of the war and of "academic truce" is the situation created by the war itself. The stream of American (and other) students to Germany is likely to be stayed or diverted for some time to come. Many will probably go to Paris, where their needs have been considered and a special doctorate has been established for them—confined to foreigners. It is felt, not only on educational but on the highest political and international grounds, that Oxford should do what it can to attract some of these students. It seems, therefore, just the psychological moment when the feasibility of any adaptation of the university to American needs can be considered as part of a wider question.

The only, or at any rate the main, thing about the statute that is controversial is the proposed adaptation of the doctorate of letters and science to a new category of student for whom it was not intended. At present it is confined to persons who have published papers or books containing an original contribution to the advancement of learning or science; and one year at least must elapse between such publication and its submission as evidence in support of an application for the degree. The doctorate is, in effect, the recognition of a reputation in some subject already acquired: it is emphatically not a young man's degree acquired after two years of advanced study. The effect of the proposed statute will be to give to the doctorate two different values, and "Gresham's Law" at once suggests itself. Many people would have preferred the French precedent—that is, a degree either of the university, as at Paris, or the Ph.D.—confined to foreigners; though this solution again has difficulties of its own, and there is much to be said for assimilating the conditions of the Oxford doctorate to those of the doctorate in other universities, and make it as much a direct encouragement to research or advanced study as the recognition of a career already established. Fortunately the preamble of the statute has left the question of the degree an open one; its actual is much less than its real importance as regards the main purport of the statute—the organization of advanced study and of a higher degree than that of bachelor corresponding to it.—*Manchester Guardian.*

THE BACHELOR OF ARTS COURSE

THE American college is far from a final settlement of either its purposes or its educational character, and is steadily changing. The fact is that we are still attempting to force into the traditional mould a stream of new educational material which needs new things with which to be of use to a new generation. And that traditional mould is built on a model brought over to New England from the seventeenth century Cambridge University by the first Harvard president, and thus passed on down the ages through primitive Yale and Princeton to the present times. Time was when a narrow and prescribed education fitted most public purposes; during that time the traditional course, largely restricted

to the classics and theology, fully met the educational calls upon the institutions giving it. With this for a foundation, the older universities built up a very respectable course of study, which was devoted, largely, however, to the study of man's social and philosophical history. Modern times have added entire new fields not only of knowledge but of technical occupations. The trend in this direction, beginning possibly around 1860, has been increasing in volume and rapidity, until to-day the demand upon the colleges to appreciate it and meet it have become stronger and stronger. One sign of the times is the emphasis put on natural science by western public schools; another is the gradual dropping of classical languages by all of the public schools; another is the dropping of Greek as a required subject for college entrance; still another sign is the unquestioned movement to let Latin follow Greek as an entrance requirement. Columbia now drops both as a requirement for her Bachelor of Arts degree. The trend, and, we think, a logical one, is toward a complete divorce from the established graduation requirements so far as they are based on the traditional classical models. Considering all of the demands upon the colleges to-day, and of the world outside upon the men whom those colleges graduate, is it not pertinent to question whether the time is not ripe at the older colleges to reorganize their curricula so as to give the classics their proper and more or less "elective" place, and face the modern world with a more modern graduation requirement? —*Yale Alumni Weekly.*

BOOKS AND LITERATURE

The Psychology of the Common Branches. By FRANK NUGENT FREEMAN, with an introduction by ELLWOOD P. CUBBERLEY. (Riverside Text-books in Education.) Houghton Mifflin Company. Pp. xii + 275.

This book attempts a systematic statement, in the light of present-day knowledge, of the psychological principles involved in the learning and in the methods of instruction of the common school subjects. In some of the subjects, such as reading, writing and spelling, there is a considerable amount of experimental and other material available for such an analysis, and these subjects have in some cases been handled individually, as in Huey's book on the "Psychology and Pedagogy of Reading." In the case of other subjects, which have not been directly investigated, there has been, as the author notes, "experimentation upon the mental processes which are obviously involved in them—as in the case of history—so that most of the discussion has some experimental foundation, direct or indirect." While analysis of the processes involved in the latter cases is difficult and conclusions risky, the author has not only succeeded in his purpose of formulating and defining some of the problems and thus stimulating investigation, but has done a good deal of constructive work.

The different school subjects are discussed, not only for themselves, but as illustrating the various kinds or methods of learning. The general plan of the book and the subjects discussed are as follows: Handwriting is considered as representing chiefly a sensorimotor form of learning; drawing, reading and music as illustrating chiefly "perceptual" learning; spelling is taken as an example of the use of drill and the fixing of associations; history and geography of the "extension of experience through imagination," mathematics as an example of abstract thought, and natural science of "generalization upon experience."

The classification is admittedly arbitrary and is apt to lead the student to think of the learning process as thus actually sectioned and parceled up. There is danger, under such a method of discussion, of losing sight of the essential unity of learning as it is involved in all these subjects, and of giving the student altogether too good a chance to preserve his faculty psychology notions and ways of looking at things. Reading, for example, is naturally as much "motor" and "associative" as it is "perceptual," and the artificiality of attempting to class music and drawing under this same rubric is apparent. Too much of reality is thus sacrificed for the purpose of classification. The criticism applies, however, chiefly to the opening paragraphs of the various chapters, and as soon as the author is under way he is but little hampered by his

own classification, and his discussions are based on accurate and interesting observations and penetrating analysis.

As an illustration of the method of development of the individual subjects, the discussion of handwriting may be in part summarized. The author has himself made important contributions to the knowledge of this subject in his recent monographs on "An Experimental Study of Handwriting" and on "The Teaching of Handwriting."

Handwriting is, as just noted, considered as illustrating learning which is largely sensorimotor in character. As a form of learning it is much more complex and artificial than is often recognized by the adult person who has forgotten his own efforts at learning to write. To quote from the author's discussion: "The first two fingers with the thumb hold the pen, while the third and fourth fingers support the weight of the hand. This division among the fingers is something which is more or less artificial; that is, it is not the natural manner in which the child grasps objects. The most primitive method of grasping an object, which is seen not merely in the child, but also in the monkey, is to fold the four fingers about it without using the thumb. The ability to place the thumb against the tips of the fingers in grasping an object is a distinctly human one and one which develops later in the child than the other form. The mere act of holding the pen in the conventional manner, then, is a matter of considerable difficulty to the child." In this connection it is interesting to recall the Chinese method of holding the pen or brush.

As is the case in all sensorimotor learning, the necessary coordinations can not be formed by "telling the pupil how the movement is made or by guidance of any sort alone." It is necessary that he find out for himself through his own attempts, that is, through a trial and error method. Verbal instructions and other guidance may assist the learner, but can never be a substitute for his own efforts. "The fact can not be too strongly emphasized that the only method by which such a form of learning can succeed is through practise."

The danger of the writing habit becoming automatic too soon is pointed out as well as that of attending to details for too long a time. The progress in speed and quality should keep pace, and the child should be able to trace his own progress in both of these respects by comparison with his own previous records. This recommendation replacing "the common method of grading the child's attainment by comparing him with others in a rough general way" is an application of the findings from the laboratory study of individual practise curves. It is of much importance for the individual's progress in handwriting, as in other studies where progress can be measured, that the individual have an opportunity to note concretely his own rate of progress. Nothing is more stimulating.

The facts presented in regard to the age differences in motor ability should modify the expectation of teachers accordingly, both as regards speed and the requirements as to accuracy of form.

The fundamental and accessory movement theory is criticized in its application to writing.

The wide range of individual differences which cause a large overlapping in the proficiency of children as they are grouped in the various grades is commented on.

Finally, the influence of the length of practise periods and of the intervals of time between periods of practise in the rate of learning is recognized in the recommendation that for children in the earlier grades "ten minutes is probably the best length of period and in the upper grades not over half an hour can be expended to the greatest advantage."

It is recognized in the discussion that writing is not, however, simply a matter of "sensorimotor" learning. As a full-fledged habit, it includes, of course, word and letter recognition and in this connection can not well be discussed without reference to the similar processes which go on in the case of reading and spelling. The reinforcement and interference in the learning of these three subjects deserves somewhat fuller discussion than is given by the author.

The associations in learning to write are made more between letters and parts of words and doubtless interfere with, quite as much as they reinforce, the word recognition habits of reading. The requirements of spelling also make for greater word analysis than is desirable when the accomplishment of reading is alone considered. The point is, however, well made that the reading of many adults, and those, too, who have been taught by the word method, is not by word wholes, but is by word-parts—except in the case of very short and familiar words. This is indicated by the extra pauses and eye movements which are made in reading single words. It is important to note, however, that this very result may be in part due to the greater analysis which the needs of writing and spelling have introduced.

There is evidence—some of it experimental—that a greater insistence on visual forms of association in all three of these subjects might lessen the interference and increase the reinforcement. It is quite certain, at any rate, that in the adult, the habits of writing and of spelling are both governed by much the same visual "cues" as in reading. Witness the queer "strangeness" which words take on when some mistake or inhibition causes one to "look at" the written words more analytically.

As a whole, the discussion of reading is a well-balanced account, but in view of the large amount of experimental work on this subject, it would have been well, in the reviewer's opinion, had the experimental findings been presented in somewhat greater detail—more as is done in the case of handwriting.

In connection with a discussion of sense training in the chapter on drawing, a well-merited criticism is made of the Montessori method as regards its assumption that "training which is necessary for the defective child is suited to be the main part of the education of the normal child."

In the chapters on history, geography, mathematics and natural science, the student will find a series of concepts interestingly worked out and applied. They should prove of particular value to teachers in the elementary school by helping them to appreciate the character of some of the problems involved in the teaching of these subjects. In these discussions, especially, the author has done much pioneer work.

Throughout the book, facts and theories are carefully weighed, and the results presented clearly and with insight into the problems involved. Points at issue are thoroughly canvassed and the conclusions drawn are well considered in the light of available experimental or other evidence. In its general method of attack and in some aspects of its organization, the book is not unlike the recent discussions of Parker and Judd on the "Methods of Teaching and the Psychology of High School Subjects," and will rank with these books as among the substantial contributions of the school of education of the University of Chicago to educational literature.

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EUROPEAN INDUSTRIAL SCHOOLS

The final and complete report of Dr. T. W. Gosling on his study of the continuation and industrial schools of Europe, more especially of Germany, and particularly of Munich, is given in the 86th annual report of the Cincinnati public schools, just issued.

After setting forth in a thorough manner his observations abroad, and the deductions drawn from his study, Dr. Gosling offers the following recommendations:

1. The development of a larger sense of responsibility in pupils should be undertaken in all schools from the lowest to the highest.

2. There should be a socialization of the work in all schools in order to substitute a social for an egoistic ideal in growing children.

3. There should be a highly developed adaptation of the school system to the needs of all kinds of children.

4. The value of concreteness of instruction should be given full recognition.

5. There should be a large increase of illustrative material in all grades of the schools.

6. There should be a studied effort to increase the amount of teaching done in the school, and to decrease the assignments for home work.

7. There should be active cooperation of schools, employers, and workmen by means of consultative committees.

8. Compulsory visits to museums and galleries should be made by children under the supervision of teachers, for the purpose of studying subjects related to the school work.

9. Compulsory visits to places of literary and historic and industrial interest within easy reach of the school should be made by children under the supervision of teachers, for the purpose of inculcating a knowledge of the environment and a sense of civic pride.

10. There should be occasional compulsory excursions to parks and playgrounds and to the country. The length of these excursions should be determined by the age of the pupils.

11. For the purpose of counteracting the forces that make for lawlessness and selfishness, great emphasis should be placed upon duty. To this end instruction in civics should receive a liberal allowance of time in the school program.

12. There should be much physical training in the open air.

13. There should be a new type of commercial course, wherein the chief emphasis would be upon training for that very large number of commercial positions which do not require a knowledge of bookkeeping and stenography.

14. A careful study of several systems of education in foreign cities serves to emphasize the superior value of the Cincinnati cooperative plan of education. This plan should be extended.

15. There is room in our educational system for a school like the German Technikum, which requires practical experience of two or more years as a condition of entrance. Such a school would appeal strongly to many who go to work early through necessity, and who would like to return to school later if tradition were not against them.

16. There should be an arts and crafts school with a well-defined vocational purpose.

17. A continuation school system modeled upon the Munich plan with instruction for ten hours a week, should be established for the benefit of those boys and girls who insist on going to work as soon as they reach the age at which they are permitted by law to leave the regular day schools. The continuation school should not be offered as a substitute for the Cincinnati cooperative plan, but only as an aid to those young people who can not or will not avail themselves of the better opportunity.

18. Both German and English experience show the economic value which the community receives by establishing opportunities for adult workers to increase their industrial efficiency. Classes for adults should become a recognized part of the Cincinnati school system.

19. There should be extensive development of the system of vocational guidance to the end that the schools may be enabled to perform the largest measure of service to pupils according to their individual abilities and needs.

THE DEPARTMENT OF HEALTH OF YALE UNIVERSITY

Immediately following the commencement meeting of the Yale Corporation last spring, definite steps were taken for the organization of a university board of health in accordance with plans discussed by the corporation during the year and approved in June. Of this board, Professor C.-E. A. Winslow, of the department of public health in the Yale School of Medicine, has been elected chairman, while Dr. James C. Greenway, '00, has been named as director of the university health department, operating under the direction of the university board of health, with offices at No. 90 High Street. The other members of the university board of health are Dean Jones, of the college; Director Chittenden, of the scientific school; Dean Blumer, of the school of medicine; Dr. W. G. Anderson, of the gymnasium; Professor Rettger, of the department of bacteriology and hygiene, in the scientific school; Professor Corwin, chairman of the Yale University Athletic Association, and Treasurer Day, of the university.

In the work of this new university department of health the legislative function and the foundation of broad policies are in the

hands of the university board of health, to which has been given power to formulate sanitary regulations for the university much as a well-organized municipal board of health does for a large city. The administrative functions of the university department of health are in the hands of its director, Dr. James C. Greenway, acting under the authority of the university board of health. To assist the director in his work it is planned that there shall ultimately be three assistants, two of them medical men to have in charge the details of medical supervision of students (with special supervision of athletes). The third will be a sanitarian, to assume charge of the inspection of the buildings and plants. In addition to these men the plan calls for a surgeon to be in constant attendance at the football field during the autumn, and for a laboratory worker, to be attached probably to the department of bacteriology and hygiene in the scientific school, to conduct the routine analyses necessary for the supervision of the food supply, the swimming pool and the like. Of the positions above mentioned two have thus far been filled, Dr. Orville F. Rogers, Jr., having been named one of the medical assistants and Dr. Leonard C. Sanford having been appointed as surgeon.

For the expenses of the department of health there will be required in the near future $15,000 a year, with the probability that as its plans are more carefully matured a larger annual budget will be necessary. For the support of the department the university has at the present time no special funds, such as have been given to other institutions. The work contemplated is, however, of such importance to the entire student body of the university that the corporation has, as stated, authorized the department to commence operations without delay, in the belief that the alumni and other friends of the university will interest themselves actively in providing the permanent endowment funds of $300,000 or more needed. In the meantime the corporation has been able to act promptly on the recommendations made for the establishment of a university health department because of the cooperation of the Yale University Athletic Association, which has pledged financial support for the project, agreeing to underwrite, as it were, with the university the preliminary requirements of the new department.

In the preliminary memorandum submitted to the corporation the possibilities of the university department of health were summarized as follows:

OUTLINE OF THE PLAN FOR SANITARY SUPERVISION OF STUDENT LIVING AND WORKING CONDITIONS

The work of the university board of health will have two somewhat distinct but closely related phases—the sanitary or environmental, and the hygienic or personal—aspect. The first of these phases will involve:

1. The study of the conditions as to ventilation of public assembly halls, the dining hall, the classrooms and other college buildings, and the working out of plans for construction and operation to improve air conditions therein.

2. The general oversight of the methods of cleaning of college buildings, dormitories, etc., so as to secure sanitary conditions and economic efficiency.

3. The control of other sanitary conditions in college buildings. There is little doubt that the efficiency of work in certain of the buildings of the university is seriously hampered by inadequate facilities for lighting. The spread of communicable disease by means of common towels, drinking cups, and the like, must be completely guarded against everywhere.

4. A very important field for work is the supervision of the university dining hall, which will involve not only inspection and systematic laboratory examination of water, milk and other food products, but also systematic and frequent medical examination of the employees to prevent the direct spread of communicable disease, and finally a comprehensive study of the dietetic aspects of the menu so that the food needs of the students may be satisfactorily met without waste or undue expense. The methods of preparing, handling and serving food will be investigated at the same time.

5. The sanitation of the swimming pool is a very important phase of the university health, and this, too, it is planned should be provided for in a definite and specific way.

6. Supervision will also be extended so far as possible to the dormitories of the university and to

private boarding houses catering to students, and of the latter, those inspected and found satisfactory from a sanitary standpoint will be placed upon a preferred list. This supervision should ensure adequate cleanliness in all such buildings and on the part of all the employees working therein.

7. There will be prepared an organized plan and a central authority for dealing with the isolation and quarantine of cases of communicable disease which may arise in the student body, and for an epidemiological investigation of outbreaks which may at any time occur.

8. It has been suggested also that sanitary supervision might be extended to the property owned by the university and rented for food stores and other purposes, in order to see that proper sanitary regulations are observed by the university's tenants.

Medical Examination and Hygienic Instruction

The second phase of the work of the university board of health will deal with the problems of personal hygiene. Disease comes either from external or internal causes; and just as the former can be prevented by removing the environmental cause, so the latter can frequently be checked by appropriate hygienic measures if the defect is detected before it has developed to a serious degree. The relief of discomfort and ineffectiveness due to defective vision, the cure of rheumatism and other obscure diseases by the removal of infected tonsils or the treatment of decayed teeth, and the protection of men with weak hearts against fatal overstrain—are only examples among a great many of the important fields for medical examination. The university could probably render its students few services of greater value than to provide for at least two complete and thorough medical examinations, one at entrance and another at the beginning of the third year. In order to be of value this examination should be made a really exhaustive one, including a thorough examination of heart and lungs, chemical and microchemical examination of urine, blood pressure determination, blood counts, etc. In view of the growing recognition of the importance of systematic medical examinations in checking the development of the degenerative diseases of adult life, it might be desirable to extend facilities along this line to the faculty and officers of the university as well. In connection with this work it has been suggested that the general administrative supervision of the Yale infirmary might be vested in the university department of health.

In addition to the working out of these plans for medical examination it can not be doubted that the student body would greatly benefit by more extensive instruction along the lines of personal hygiene than is given at present. Required study of this subject should be extended and might with advantage be supplemented by the preparation of circulars and by the publication in student periodicals of practical information in regard to the regulation of the diet and other aspects of personal hygiene. Physicians in New Haven having a large practise among the student body state that four fifths of the ailments of the students are due to dietary indiscretions.

Supervision of the Health of Athletes

A special phase of this work, of peculiar importance, is the supervision of the health of the students who engage in competitive athletics. Such supervision should not be merely remedial but preventive, and should involve fundamental studies of the effects of various forms of athletic exercise upon health in order that real dangers may be avoided while sweeping criticisms of competitive athletics may be submitted to the test of scientific study. Medical supervision should be provided at the training quarters in New London throughout the training season. Efforts to secure a more general participation in athletics on the part of the student body as a whole should be contemplated as an important part of the task of health supervision.

A plan originally outlined by Dr. John A. Hartwell for the University Athletic Association, and modified below with Dr. Hartwell's approval to fit in with this general scheme, emphasizes the following points as essential to the proper care of university athletes.

"1. No student in the university shall be eligible to compete in organized athletics until he has presented to the University Athletic Association a certificate signed by the health officer stating that he is physically qualified so to compete. Each captain or his representative shall furnish the University Athletic Association with the names of all students competing in his department.

"2. It shall be the duty of the health officer and his assistants to make periodical examinations of those men engaged in organized athletics at such intervals as may be designated by the university board of health. He shall examine all cases of illness occurring among those engaged in organized athletics and shall report his findings to the university health board.

"3. A surgeon shall be provided to care for all injuries received by any member of the university engaged in organized athletics or gymnasium exercises. He shall report such cases to the health officer, and if he deem the injury sufficiently severe to prevent participation in athletics he shall so state. He shall be present at such athletic games and practise as may be deemed necessary by the university board of health.

"4. Each captain or his representative shall notify the health officer or the surgeon when any student engaged in organized athletics under him is suffering from any illness or injury.

"5. In case the health officer determines, after consultation with the university board of health, that any student is physically unfit to compete in any branch of athletics, either by reason of illness or injury, he shall immediately notify the chairman of the University Athletic Association to this effect, who in turn shall notify the official head of the department to which such student belongs. A student so disqualified may not compete until disqualification is removed by the health officer with the sanction of the university board of health.

"6. Nothing in the foregoing shall be construed as preventing students or their parents from procuring advice from competent physicians or surgeons of their own choice."

EDUCATIONAL RESEARCH AND STATISTICS

A STUDY IN SELF-APPRAISAL

I

According to the requirements of the Board of Education and the Board of Superintendents of the City of New York, at the end of each term the principal of a school must rate the teachers in instruction and discipline. The ratings are as follows: Meritorious: A (highest grade), B plus, B; Non-meritorious: C (inferior), D (deficient). These ratings are filed, and become part of teachers' records.

In the recent past, great dissatisfaction has been expressed with the above procedure. Teachers resent it as unprofessional; they say that lawyers and physicians are not rated. Many principals dislike it because it creates ill feeling on the part of those who are not pleased with their ratings. Both agree that the ratings represent merely the personal opinion of the principal; there are no definite standards of appraisal, and a teacher may be rated differently by different principals.

It occurred to the writer that it would be well to obtain some indisputable good from the prescribed rating of teachers by the principal. At a teachers' meeting he therefore announced the following:

1. That the teachers will be asked to rate themselves at the end of the term, and will have the right to supplement these ratings with such remarks and explanations as they may deem necessary.

2. That the principal will formulate his ratings independently.

3. That after a comparison of the two, the final official ratings will be made by the principal.

The objects of this proceeding were stated by him to be as follows:

1. To assist the principal in formulating a just estimate of the teacher's work.

2. To induce self-analysis and self-criticism on the part of the teachers, in accordance with standards to be agreed upon by all of them.

At a subsequent meeting, the teachers discussed the problem as to which elements are essential in the make-up of an "A" teacher. A number of suggestions were made, and the following were accepted unanimously:

1. The teacher who is "A" in instruction (*a*) has scholarship, (*b*) prepares his work thoroughly, (*c*) drills thoroughly, (*d*) "gets it over," (*e*) interests the pupils, (*f*) gets the *pupils* to do as much of the work as possible, (*g*) provides for the exceptional pupils.

2. The teacher who is "A" in discipline (*a*) has sympathy and patience, (*b*) has self-control and poise, (*c*) brings out the best in his pupils, (*d*) develops self-control on the part of the pupils, (*e*) develops in the pupils proper habits of action, both in and out of the classroom.

II

At the end of the term, the teachers of all the grades, from kindergarten through the eighth year, filed their auto ratings with the principal. Several teachers were away because of illness, etc., and only 39 are to be considered.

The following table shows the ratings given

by the teachers themselves, and those given by the principal. Each teacher has two ratings, one in instruction, and one in discipline.

TABLE I

Number of Teachers	Teachers' Rating		Principal's Rating	
	Instr.	Discipl.	Instr.	Discipl.
12	A	A	A	A
2	A	A	B plus	A
2	A	A	A	B plus
2	A	A	B plus	B plus
1	A	A	B plus	B
2	B plus	A	A	A
1	B plus	A	A	B plus
2	B plus	A	B plus	A
1	B plus	A	B plus	B plus
1	A	B plus	A	B plus
1	A	B plus	B plus	B plus
1	B plus	B plus	B plus	B plus
1	B	A	B plus	A
2	B	B plus	B plus	B plus
3	.....	.....	A	A
1	.....	.....	B plus	A
3	.....	.....	B plus	B plus
1	.....	.....	B	B
39				

Eight teachers declined to rate themselves. They received the following ratings from the principal at the end of the previous term:

TABLE II

	Instr.	Disc.
3 teachers	A	A
1	B plus	A
2	B plus	B plus
1	B plus	B
1	B	B plus
8		

Almost all these had received high ratings, and therefore should not have been deterred from self-appraisal by the fear of overrating themselves. They could have safely rated themselves at least as high as they were rated by the principal previously. Excessive diffidence or perhaps mental indolence may account for their failure to participate in this experiment.

III

Before commenting on the results, it must be stated that it is assumed in the following discussion, that the judgment of the principal, as expressed in his final ratings, more nearly approximated the truth, than that of the teachers, as expressed in their auto ratings. However erroneous this assumption may be in reality, it must be accepted as essential to this study.

1. The auto ratings of 16 teachers out of 31 were identical with those given them by the principal. This is a rather large number, but may be explained partly by a consideration of the following table, which shows the ratings received by them at the end of the previous and of the present term:

TABLE III

Number	Previous Term		Present Term	
	Instr.	Disc.	Instr.	Disc.
10	A	A	A	A
1	A	B plus	A	A
1	B plus	A	A	A
2	B plus	B plus	A	A
1	A	B plus	A	B plus
1	B	B plus	B plus	B plus

It is evident that without excessive introspection, 11 out of the 16 might have based their auto rating on the principal's last estimate. They may have felt either that the principal will not lower their rating, or that their work was of about the same character as before.

The others probably considered the last rating too low, or thought that their work had improved.

2. There were six teachers who were rated higher in instruction by the principal than by themselves.

TABLE IV

Number	Teachers' Rating	Prin.'s Rating
3	B plus	A
3	B	B plus
6		

Four of these were young teachers, one to three years in service. There is little doubt that the underrating was due mainly to modesty, or to unwillingness to appear conceited.

3. Six teachers estimated their ability in instruction higher than the principal did.

TABLE V

Number	Teachers' Rating	Prin.'s Rating
6	A	B plus

These teachers have been in service from 8 to 20 years. They did not seem to realize their shortcomings, judged by the standards formulated by the teachers themselves. Some of them confused willingness and effort with actual accomplishment; their remarks indicated the existence of the belief that because they did all in their power to obtain satisfactory results, and because they were conscientious in their work, they were entitled to the highest rating.

4. As far as discipline is concerned, there were no auto ratings lower than the principal's.

Evidently, teachers are more ready to acknowledge that there is room for improvement as far as quality of instruction is concerned, than that their discipline is not all it should be. They seem to feel that skill in discipline is more easily achieved than skill in instruction, and are more modest about their instruction than about their discipline.

5. Seven teachers thought more highly of their discipline than the principal did.

TABLE VI

Number	Teachers' Rating	Prin.'s Rating
6	A	B plus
1	A	B

7

In the judgment of the writer, these teachers also failed to discriminate between attempts and ability to realize the aims set forth previously. The fact that six of these teachers have had considerable experience, did not seem to aid them in arriving at a correct self evaluation.

6.

TABLE VII

Number	Teachers' Rating		Principal's Rating	
	Instr.	Disc.	Instr.	Disc.
2	A	A	B plus	B plus
1	A	A	B plus	B

The above table shows that only three teachers overestimated their skill in both instruction and discipline. This may be taken to indicate that there is but a slight tendency on the part of teachers to err in both respects.

It may be noted that no teacher underrated himself in both instruction and discipline.

IV

To what extent have the aims of this experiment been accomplished?

1. In but two cases, the principal was impelled to change his original rating to that presented by the teacher. In one, he changed the rating in instruction from B plus to A, and in the other the rating in discipline from B plus to A. The teachers' auto ratings prompted him to consider his more carefully, with the above result.

2. It is very probable that the teachers subjected themselves to honest self-scrutiny; of course, some of the auto ratings may have been the results of hasty, emotional judgment rather than of careful, logical self-analysis.

Out of the 62 possible ratings, only 19 given by the teachers differed from those given by the principal. Sixty-nine per cent. of the ratings were identical. Is it too much then to expect that with continued training a time may come when there will be practically unanimous agreement between the two, and when teachers' auto ratings may be accepted as final, with possible checking up of doubtful cases by the supervising staff?

Be it as it may, the writer is convinced that if teachers' ratings are to serve any useful purpose, they should be the result of cooperative study on the part of teachers and supervisors. Unless the teacher acknowledges the justice of his ratings, they become merely sources of irritation and unhappiness, and consequently a cause of diminished efficiency. Neglecting for the present the larger problem, whether such ratings are necessary in our profession, we may accept the principle that only intelligent self-criticism can lead to real and permanent improvement. Whether the results of this experiment show that teachers have or have not the capacity for such intelligent self-criticism, it may be asserted that only through continued and persistent practise of this kind will such capacity be developed.

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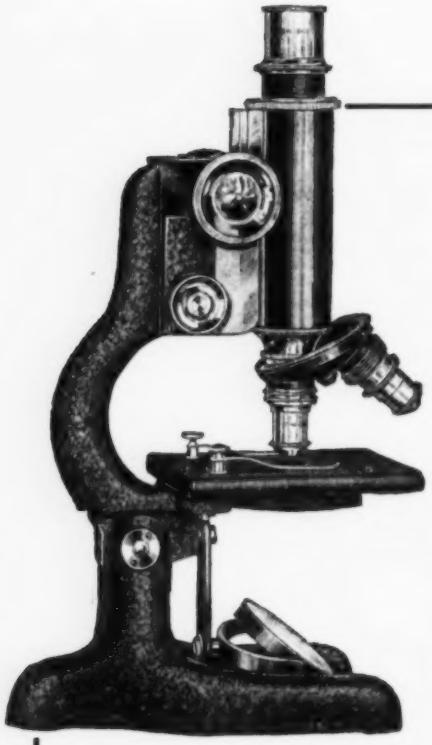

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